

RemarksStatus of Claims

The Examiner's Office action mailed July 20, 2008 which rejected pending claims 1-11, 14-16, and 21-23 has been reviewed. Claims 1-3, 8-9, 14-16, 21, and 23 have been amended, claim 10 has been cancelled, and new claim 24 has been added. Accordingly, claims 1-9, 11, 14-16, and 21-24 are now pending in the application, of which claims 1, 9, 14, 21, and 23 are independent claims. In view of the following remarks, Applicants respectfully submit that the application is in condition for allowance.

Claim Rejections Under 35 U.S.C. § 103

Claims 1-11, 14-16, and 21-23 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent Application Publication No. 2004/0098478 to Koetke et al. ("Koetke") in view of U.S. Patent Application Publication No. 2003/0041036 to Molinari et al. ("Molinari."). (Note, the body of the Office action refers to rejection under 35 U.S.C. § 103(a) of claims 19-20, but this is understood to refer to claims 21-23). Applicants traverse this rejection, withdrawal of which is respectfully requested.

Applicants submit that taken alone or when combined as suggested by the Office, the Koetke and Molinari references fail to disclose, teach, or suggest all the features of Applicants' claimed invention. The following is claim 1 with underlined portions that are not disclosed, taught, or suggested by the cited references.

1. A system for electronic supply chain management and collaborative planning, including:
 - a plurality of hubs, remotely coupled to each other;
 - a set of supply chain information stored in a database coupled to each said hub,
wherein said set of supply chain information is owned by business entities
relatively proximate to each said hub;
 - a set of regional authorities controlling access to said set of information;
 - a first server coupled to at least one of said hubs, wherein said first server is
dedicated to process a first message type that requires access to and
processing of said supply chain information stored in said database;
 - a second server coupled to said at least one of said hubs, wherein said second
server is dedicated to process a second message type that does not require
access to and processing of said supply chain information stored in said
database; and

a computer program coupled to said at least one of said hubs to receive a message generated from a client device identifying a transaction, to determine whether said message requires access to and processing of said supply chain information stored in said database based on said transaction, to send said message to said first server when said message is determined to be said first message type, and to send said message to said second server when said message is determined to be said second message type.

Since Koetke and Molinari, whether considered alone or in combination, do not disclose, teach, or suggest the underlined elements in claim 1, the cited references do not render claim 1 unpatentable under 35 U.S.C. § 103(a).

Claim 1 is herein amended to specify that the information in the database is “supply chain” information. A computer program determines whether messages received by the local hub are processed by the first server or by the second server depending on whether each message requires access to and processing of supply chain information stored in the database. A message type that requires such access and processing is processed by the first server, while a message type that does not require such access and processing is processed by the second server. This replaces the prior distinguishing factor of “simple tasks” versus “complex tasks”.

As thus amended, claim 1 further defines aspects of applicants’ multi-hub system for distributed control and efficient processing of supply chain information. Transactions identified by messages from a client device are separated into tasks that require processing of supply chain information accessed from the database, and tasks that do not require processing of information accessed from the database. Examples of such transactions and such processing are given at pages 5 and 17-18 of the present application. This newly claimed use of first and second servers depending on the need to access and process supply chain information is complementary to the feature in claim 1 of distributed control of supply chain information at local hubs. The supply chain information is owned by business entities relatively proximate to each said local hub, and regional authorities control access to the supply chain information.

The Office action asserts that Koetke, as set forth in previous Office actions, discloses the invention substantially as claimed (for example at Koetke’s paragraphs 0048-0054), but acknowledges that Koetke does not specifically disclose performing distinguished simple tasks and distinguished complex tasks. However, the Office action repeats the previous Office action’s citation of Molinari (in particular paragraphs 0027 and 0048) as remedying the

deficiencies of Koetke. Applicants submit that even when combined as suggested by the Examiner, Koetke and Molinari fail to disclose, teach, or suggest the claimed invention, and that the amendments of claim 1 herein further distinguish these references.

Koetke teaches a system for client-side monitoring of performance of client-server interactions. Performance data is stored on the clients until transmitted to servers or until “aged” beyond a server-specified maximum. Performance data received from the clients is accumulated by the servers, and accumulated performance data may trigger event log entries. Koetke teaches such client-server interactions to monitor performance in the context of e-mail systems -- see e.g. paras. [0003]-[0007] -- and associated messaging services. For example, para. [0065] referencing Figs. 9A-9B discusses servers that handle various messaging services. Mailbox server 902 stores users’ e-mail; free-busy server 904 maintains a user’s calendar; public folder server 906 stores e-mail addressed to a public folder or discussion topic; and a Global Catalog (GC) server maintains a user directory that may be part of a directory service.

Paragraph [0065] and Figs. 9A-9B describe one context in which messages are routed among multiple servers, i.e. routing that depends on the messaging service supported by the respective server. Another context is provided in paragraph [0053], discussing clients sending performance data to multiple servers 618, 620, 622, wherein each server is of a different type e.g. of the messaging service types mentioned above. This paragraph describes that in collecting performance data one of the servers is designated as a “primary server”, which is configured to collect data not only as to its own interactions but regarding clients’ interactions with auxiliary (non-primary) servers. Fig. 6 and paragraph [0054] provides an example of such collection of performance data from client devices by multiple (primary and auxiliary) servers.

Applicants respectfully submit that Koetke fails to teach or suggest certain features of applicants’ claimed invention for which it is cited in the Office action, and furthermore that Koetke does not teach features newly included in claim 1 as herein amended.

First, Koetke does not teach the features: “a set of supply chain information stored in a database coupled to each said hub, wherein said set of supply chain information is owned by business entities relatively proximate to each said hub; a set of regional authorities controlling access to said supply chain information.” Koetke teaches client-server interactions for monitoring performance in e-mail systems that may provide various messaging services. Koetke does not teach a system for storing supply chain information in a distributed computing system

in which local hubs store information owned by business entities relatively proximate to each said hub. Koetke does not teach or suggest data “ownership” in relation to management of data by local hubs with data stored in a database coupled to each hub. Koetke does not teach or suggest the ownership of supply chain information by local business entities proximate to each of said hubs. Furthermore, Koetke does not teach regional authorities that control access to the supply chain information.

Secondly, Koetke does not teach the features:

“said first server is dedicated to process a first message type that requires access to and processing of said supply chain information stored in said database”;

“said second server is dedicated to process a second message type that does not require access to and processing of said supply chain information stored in said database;

“a computer program ...to determine whether said message requires access to and processing of said supply chain information stored in said database based on said transaction, to send said message to said first server when said message is determined to be said first message type, and to send said message to said second server when said message is determined to be said second message type”.

As discussed above, Koetke teaches the routing of client messages to one or more server. However as summarized above Koetke’s routing of messages is done for the purpose of routing messages to servers that carry out specialized messaging services; and for the purpose of routing messages to primary and auxiliary servers that process performance data received from the clients. Koetke, which does not involve a distributed database management application and in particular a supply chain management application, does not teach or suggest the routing of messages depending on the nature of message generated from a client device identifying a transaction. Koetke does not teach the routing of messages depending on whether the message requires access to and processing of said supply chain information stored in the database based on the transaction.

A prior Office action cites paras. [0032]-[0034], paras. [0044]-[0049], para. [0158], and Figs. 9A-B of Koetke as teaching various features of independent and dependent claims. These rejections and citations from Koetke are again relied upon in the pending Office action.

Paragraphs [0032]-[0034] provide a background discussion of a networked environment illustrated in Figs. 1-2. Although this discloses a client-server environment in the broadest sense there is no teaching of clients being associated with trading partners (in claim 1, business entities

who own supply chain information); no teaching of business entities being relatively proximate to each hub (or server); no teaching of regional authorities to control access to the supply chain information.

Paragraphs [0044]-[0049] teach a client-site and server-site performance data architecture, that generates performance data associated with remote procedure calls (RPCs). This architecture includes a client-site module that parse performance data related information, and that formats performance data for transmission to the server. The architecture also includes a server side module architecture that parses performance data incoming from clients and that may be passed to a performance data report module, or performance data conceptualized module, for further processing; para. [0048]. The performance data conceptualize module may build a performance data context map.

Although paragraphs [0044]-[0049] of Koetke teach server-side parsing of performance data received from clients, these paragraphs do not discuss parsing messages generated from a client device identifying a transaction, and in particular do not teach or suggest the use of a computer program to determine whether each message requires access to and processing of said supply chain information stored in said database based on such transaction. Furthermore, Koetke does not teach or suggest, as a result of such determination, sending the message to a first server when the message is determined to be said a message type (i.e. a message that requires access to and processing of supply chain information), and sending the message to a second server when said message is determined to be a second message type (i.e. a message that does not require access to and processing of supply chain information). As discussed above, Koetke's servers are designed to handle particular messaging services and secondarily to process performance data from clients. The roles of Koetke's servers do not related to whether or not a message requires accessing and processing database information, particularly supply chain information.

Paragraph [0158] (page 12) of Koetke discusses lightweight and heavyweight globally unique identifiers, and have been discussed in a prior Response. Paragraph [0158] of Koetke discloses a globally unique identifier, which is either a 2 byte or 16 byte identifier for a session. The terms "heavyweight" and "lightweight" as used in Koetke merely describe the size of the identifier. Paragraph 0158 does not disclose or suggest the routing of messages to a first server or second server depending on whether the message requires access to and processing of said supply chain information stored in said database based on the transaction.

Figures 9A and 9B are discussed above in the discussion of paragraph [0065] and specialized servers for various messaging services. As previously explained, these specialized servers and the routing of messages to these servers are quite different than the routing of messages to the first and second servers in applicants' system for electronic supply chain management and collaborative planning.

Turning to the secondary reference, the Office action cites Molinari as teaching a system and corresponding method for providing information over a computer network comprising performing distinguished simple tasks and distinguished complex tasks (paras. [0027] and [0048]). The amendment of claim 1 as to messages routed to the first and second servers (which now depends on "whether said message requires access to and processing of said supply chain information stored in said database", rather than "simple tasks" and "complex tasks") provides a patentable difference from Molinari; this and other differences are discussed below.

Paragraph [0027] and subsequent paragraphs of Molinari make clear that Molinari's system does not involve first and second servers. Rather, Molinari discloses a client server architecture with a single server and a series of "distributed agents" that are associated with client computers (para. [0027], discusses the installation of an agent and associated task on a client computer, e.g. by downloading the agent from a network). For example, the client computer at which the task is executed can be a user's computer -- see claim 11. Paragraphs [0027]-[0028] explain Molinari's tasks and assignments data structure in which tasks are self-contained executable objects that are executed by the distributed agents. Assignments are created by the server and contain information about a task; assignment data is maintained in a task library database at the server.

Paragraph [0048] of Molinari discusses a "dynamic task loader" that is a part of the distributed agent that prepares for the execution of tasks. The dynamic task loader looks for a task definition in memory, requesting the task definition from the server if it is not found. Once the task definition is loaded, the dynamic task loader configures the task according to parameters in the task assignment, whereupon the task is ready to execute. In the context of the rejection, it is noteworthy that these task loader activities occur at a client computer, not at a second server.

Paragraphs [0027] and [0048], and Molinari as a whole, do not teach or suggest applicants' system wherein messages are generated from a client device identifying a transaction; and wherein these messages are selectively routed to first and second servers depending on

whether said message requires access to and processing of said supply chain information stored in said database based on said transaction:

- Molinari's architecture does not involve first and second servers, but rather client ("distributed agents")-server distributed computing.
- Even in the context of a different architecture, Molinari does not teach selective routing of messages depending upon whether each message requires access to and processing of information stored in a database (e.g. of supply chain information), based upon a transaction associated with the message. The amendment of claim 1 supports this point of distinction over Molinari.
- Molinari discloses that the server creates and assigns one or more tasks to obtain relevant financial information about the financial instruments that fall within the plurality of investment strategies based on the investor profile information. (Paragraph 0018.) Molinari does not disclose receiving a message generated from a client device identifying a transaction and determining whether the message is the first message type or the second message type based on the transaction.

Whether taken alone or combined as suggested by the Office, the Koetke and Molinari references fail to disclose, teach, or suggest all the features of Applicants' claimed invention of claim 9. The following is claim 9 with underlined portions that are not disclosed, taught, or suggested by the cited references.

9. A method for processing transactions at a hub for electronic supply chain management, said method including steps of:
receiving messages from at least one client device at a software module of a local hub, said software module executable by a processing device, said local hub coupled to a database of information regarding supply chain management;
parsing each of said messages and determining whether each message requires access to and processing of information stored in said database ;
separating each of said messages into a first type of message or a second type of message, wherein said first type of message requires access to and processing of information stored in said database , and said second type of message does not require access to and processing of information stored in said database;
sending said first type of message to a heavyweight server, wherein said heavyweight server accesses information stored in said database, processes said first type of message and said information stored in said database, and transmits

data resulting from the processing of said first type of message and said information stored in said database; and
sending said second type of message to a lightweight server, wherein said second type of message is transmitted from said lightweight server without accessing and processing information stored in said database.

Claim 9 is herein amended to specify that the local hub is coupled to a database of information regarding supply chain management. The parsing step determines whether each message requires access to and processing of information stored in said database, and the separating step separates messages into first and second messages depending on this determination. The heavyweight server accesses information stored in the database, processes the first type of message and said information stored in said database, and transmits data resulting from the processing of said first type of message and said information stored in the database. The lightweight server transmits the second type of message without accessing and processing information stored in the database.

The arguments presented above for the patentability of claim 1 over Koetke and Molinari – and especially those arguments pertaining to the first server, second server, and computer program of claim 1 -- apply to claim 9 as well. In carrying over these arguments, the heavyweight server of claim 9 corresponds to the first server of claim 1, and the lightweight server of claim 9 corresponds to the second server of claim 1.

Additionally, the method of claim 9 specifies that the heavyweight server processes the first type of message and said information stored in said database, and transmits data resulting from the processing of said first type of message and said information stored in the database; whereas the lightweight server transmits the second type of message without processing information. This difference in message processing of heavyweight and lightweight servers, appropriate to the parsed and separated message, is not taught or suggested in Koetke and Molinari.

Whether taken alone or combined as suggested by the Office, the Koetke and Molinari references fail to disclose, teach, or suggest all the features of Applicants' claimed invention of claim 14. The following is claim 14 with underlined portions that are not disclosed, taught, or suggested by the cited references.

14. A module including instructions executable by a processing device, the instructions including:

receiving messages from a user at a local hub, said local hub coupled to a database of information for supply chain management;

parsing each of said messages and determining whether each message requires access to and processing of information stored in said database ;

separating each of said messages into a first type of message or a second type of message, wherein said first type of message requires access to and processing of information stored in said database, and said second type of message does not require access to and processing of information stored in said database ;

sending said first type of message to a heavyweight server, wherein said heavyweight server accesses information stored in said database, processes said first type of message and said information stored in said database, and transmits data resulting from the processing of said first type of message and said information stored in said database and

sending said second type of message to a lightweight server, wherein said second type of message is transmitted from said lightweight server without accessing and processing information stored in said database.

The module claim 14 is herein amended to specify that the local hub is coupled to a database of information regarding supply chain management. The parsing instruction determines whether each message requires access to and processing of information stored in said database, and the separating instruction separates messages into first and second messages depending on this determination. In the instruction for sending the first type of message, the heavyweight server accesses information stored in the database, processes the first type of message and the information stored in said database, and transmits data resulting from the processing of said first type of message and the information stored in the database. The lightweight server transmits the second type of message without accessing and processing information stored in the database.

The arguments presented above for the patentability of claim 1 over Koetke and Molinari – and especially those arguments pertaining to the first server, second server, and computer program of claim 1 -- apply to claim 14 as well. In carrying over these arguments, the heavyweight server of claim 14 corresponds to the first server of claim 1, and the lightweight server of claim 14 corresponds to the second server of claim 1.

Additionally, the module of claim 14 specifies that the heavyweight server processes the first type of message and said information stored in said database, and transmits data resulting from the processing of said first type of message and said information stored in the database; whereas the lightweight server transmits the second type of message without processing information. This difference in message processing of heavyweight and lightweight servers,

appropriate to messages identified by the module's parsing and separating instructions, is not taught or suggested in Koetke and Molinari.

Whether taken alone or combined as suggested by the Office, the Koetke and Molinari references fail to disclose, teach, or suggest all the features of Applicants' claimed invention of claim 21. The following is claim 21 with underlined portions that are not disclosed, taught, or suggested by the cited references.

21. A system for electronic supply chain management and collaborative planning, including:
 a plurality of local hubs, remotely coupled to each other, each of said plurality of local hubs including:
a database to store supply chain information, wherein said supply chain information is owned by business entities relatively proximate to each said local hub;
a heavyweight server to process a first type of message that requires access to and processing of said supply chain information stored in said database;
 and
a lightweight server to process a second type of message that does not require access to and processing of said supply chain information stored in said database;
a first regional authority corresponding to one of said plurality of local hubs for controlling access to said supply chain information in databases associated with a first group of said plurality of local hubs;
a second regional authority corresponding to another one of said plurality of local hubs for controlling access to said supply chain information in databases associated with a second group of said plurality of local hubs; and
a communication network to communicate between said first regional authority and said second regional authority, wherein said first regional authority requests instructions for obtaining data under control of said second regional authority.

Claim 21 is amended to specify that the plurality of local hubs include a heavyweight server to process a first type of message that requires access to and processing of said supply chain information stored in said database; and a lightweight server to process a second type of message that does not require access to and processing of said supply chain information stored in said database.

The arguments presented above for the patentability of claim 1 over Koetke and Molinari apply as well to the system of claim 21. In carrying over these arguments, the heavyweight

server of claim 21 corresponds to the first server of claim 1, and the lightweight server of claim 21 corresponds to the second server of claim 1.

In addition, claim 21 specifies first and second regional authorities, each corresponding to respective ones of the plurality of local hubs. Each of the first and second regional authorities controls access to a respective group of said plurality of local hubs. The first regional authority contacts the second regional authority over a communication network to request instructions for obtaining data under the control of the second regional authority. Neither Koetke nor Molinari teaches or suggests these features of the system of claim 21.

Whether taken alone or combined as suggested by the Office, the Koetke and Molinari references fail to disclose, teach, or suggest all the features of Applicants' claimed invention of claim 23. The following is claim 23 with underlined portions that are not disclosed, taught, or suggested by the cited references.

23. A system for electronic supply chain management and collaborative planning, including:
a plurality of local hubs, remotely coupled to each other via a communication network and each including:
a database to store a set of information, wherein said set of information is owned by business entities relatively proximate to each said hub;
a first server to process a first message type that requires access to and processing of said information stored in said database;
a second server to process a second message type that does not require access to and processing of said information stored in said database; and
a computer program executable by at least one of said first and second servers in response to a message from a client device identifying a transaction, to determine whether said message is said first message type or said second message type based on said transaction, to send said message to said first server when said message is determined to be said first message type, and to send said message to said second server when said message is determined to be said second message type.

Claim 23 is amended to specify that the first server processes a first message type that requires access to and processing of said information stored in said database for complex tasks using said set of information; while the second server processes a second message type that does not require access to and processing of said information stored in said database for simple tasks.

Referring to the limitations of claim 23 underlined above, most of the arguments presented above for the patentability of claim 1 over Koetke and Molinari apply as well to the

system of claim 23. Claim 23 does not call for a regional authority, and the information stored in the database is described as a “set of information...owned by business entities relatively proximate to each said hub”. Therefore certain remarks for the patentability of claim 1 do not carry over to claim 23. Like the other independent claims, claim 23 has been amended to include the feature of first and second (or heavyweight and lightweight) servers that respectively process messages that do, or do not, require accessing information in the database and processing such information.

New dependent claim 24, dependent from claim 1, specifies that a given regional authority of said set of regional authorities has authority over said at least one of said hubs. The computer program submits the message to the given regional authority in order to write data from said message to said database. This dependent claim covers an additional feature of the system of claim 1 of contacting a regional authority for permission to write to the database, for data controlled by that regional authority. As discussed in the application, this control over writing to the database is a primary attribute of data ownership and control.

No Admission

Applicant’s decision not to argue each of the dependent claims separately is not an admission that the subject matter of those claims is disclosed or suggested by the applied art.

Closing

For the foregoing reasons, Applicants respectfully submit that all pending claims are patentable over the art of record. To discuss any matter pertaining to the present application, the Examiner is invited to call the practitioner of record, Steven Swernofsky, at (650) 947-0700. Having made an effort to bring the application in condition for allowance, a timely notice to this effect is earnestly solicited.

Respectfully submitted,

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